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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/665,802

09/18/2003

Darrin W. Kabel

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09/22/2006

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EXAMINER

WEISKOPF, MARIE

ART UNIT

PAPER NUMBER

3661

DATE MAILED: 09/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/665,802	KABEL ET AL.	
	Examiner	Art Unit	
	Marie A. Weiskopf	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10, 12-21, 23-33 and 35-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10, 12-15, 20, 21, 23-33 and 35-46 is/are rejected.
- 7) ☒ Claim(s) 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/2/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1-2, 4, 6-9, 12-15, 20, 29-32, 35-36, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fruchterman et al. (US005470233A) in view of Tognazzini (US005872526A).

a. Per claim 1, Fruchterman teaches a method including calculating a course between two or more waypoints (column 4, lines 47-54), analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34), and providing an alert signal when the course contains user identified criteria (column 17, lines 34-37 and lines 47-49). Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) and a predetermined area around the area of exclusion (column 17, lines 24-49). Fruchterman does not teach a predetermined area around a user with a predetermined shaped based on heading. Tognazzini teaches a GPS collision

avoidance system that uses GPS data to determine heading and calculates a predetermined area based on heading (column 7-8). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use heading information derived from the GPS data received in the Fruchterman invention, to calculate an area around the user, as taught by Tognazzini, in order to create a warning zone around the user.

b. Per claim 2, Fruchterman teaches calculating the course to avoid the area (column 17, lines 47-48).

c. Per claim 4, Fruchterman teaches recalculating the course to avoid the area (column 17, lines 47-48).

d. Per claim 6, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

e. Per claim 7, Fruchterman teaches that the area of exclusion can be any area relevant to a blind pedestrian and gives an example of a body of water (column 5, lines 1-10).

f. Per claim 8, Fruchterman teaches a method of calculating a course between two or more waypoints (column 4, lines 47-54), analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34), and calculating the course to avoid the user identified criteria (column 17, lines 34-37 and lines 47-49). Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) and a predetermined area around the area of exclusion (column 17, lines 24-49). Fruchterman does not teach a predetermined area around a user with a predetermined shaped based on heading. Tognazzini teaches a GPS collision

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avoidance system that uses GPS data to determine heading and calculates a predetermined area based on heading (column 7-8). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use heading information derived from the GPS data received in the Fruchterman invention, to calculate an area around the user, as taught by Tognazzini, in order to create a warning zone around the user.

g. Per claim 9, Fruchterman teaches recalculating the course to avoid the area (column 17, lines 47-48).

h. Per claim 12, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

i. Per claim 13, Fruchterman teaches that the area of exclusion can be any area relevant to a blind pedestrian and gives an example of a body of water (column 5, lines 1-10).

j. Per claim 14, Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34) around a predetermined area (column 19, lines 60-65). Fruchterman does not teach a predetermined area around a user with a predetermined shaped based on heading. Tognazzini teaches a GPS collision avoidance system that uses GPS data to determine heading and calculates a predetermined area based on heading (column 7-8). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use heading information derived from the GPS data received in the Fruchterman invention, to calculate an area around the user, as taught by Tognazzini, in order to create a warning zone around the user.

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k. Per claim 15, Fruchterman teaches providing an alert signal when the area contains user identified criteria (column 17, lines 34-37 and lines 47-49).

l. Per claim 20, Fruchterman teaches that the area of exclusion can be any area relevant to a blind pedestrian and gives an example of a body of water (column 5, lines 1-10).

m. Per claim 29, Fruchterman teaches a computer readable medium having a set of computer readable instructions (column 17, lines 53-57) for causing a device to perform a method including calculating a course between two or more waypoints (column 4, lines 47-54), analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34), and providing an alert signal when the course contains user identified criteria (column 17, lines 34-37 and lines 47-49). Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) and a predetermined area around the area of exclusion (column 17, lines 24-49).

Fruchterman does not teach a predetermined area around a user with a predetermined shaped based on speed. Tognazzini teaches a GPS collision avoidance system that uses GPS data to determine velocity and calculates a predetermined area based on a velocity vector (column 7-8). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use velocity information derived from the GPS data received in the Fruchterman invention, to calculate an area around the user, as taught by Tognazzini, in order to create a warning zone around the user. It would be obvious to create the warning area around the user to be a bigger size depending on the speed of the user because the faster the user is going the bigger the area necessary to avoid.

If the user is going at a slower speed, it would be easier to make maneuvers to avoid the exclusion area compared to if the user was going at higher speeds.

n. Per claims 30 and 31, Fruchterman teaches calculating the course to avoid the area (column 17, lines 47-48).

o. Per claim 32, Fruchterman teaches recalculating the course to avoid the area (column 17, lines 47-48).

p. Per claim 35, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

q. Per claim 36, Fruchterman teaches that the area of exclusion can be any area relevant to a blind pedestrian and gives an example of a body of water (column 5, lines 1-10).

r. Per claim 44, Fruchterman teaches a navigation device including a processor, a GPS receiver, and a memory to determine present location coordinates (column 7, lines 9-11) and to analyze cartographic data for user identified criteria to avoid (column 17, lines 24-34). Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) and a predetermined area around the area of exclusion (column 17, lines 24-49). Fruchterman does not teach a predetermined area around a user with a predetermined shaped based on speed and heading.

Tognazzini teaches a GPS collision avoidance system that uses GPS data to determine velocity and heading to calculate a predetermined area based on a heading and a velocity vector (column 7-8). It would have been obvious to one of ordinary skill in the art, at the time of invention, to use velocity and heading information derived from the

GPS data received in the Fruchterman invention, to calculate an area around the user, as taught by Tognazzini, in order to create a warning zone around the user. It would be obvious to create the warning area around the user to be a bigger size depending on the speed of the user because the faster the user is going the bigger the area necessary to avoid. If the user is going at a slower speed, it would be easier to make maneuvers to avoid the exclusion area compared to if the user was going at higher speeds.

s. Per claim 45, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

t. Per claim 46, Fruchterman teaches recording a track log (column 20, lines 15-31).

2. Claims 3, 10 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fruchterman and Tognazzini in view of Colley (US 5,592,382).

a. Per claims 3, 10 and 33, Fruchterman and Tognazzini fail to disclose calculating the course including identifying one or more non-user selected waypoints on the course. Colley, however, discusses the use of having intermediate waypoints along a segment to be able to establish that a vehicle is going the correct way and staying on course, which is well known in the art. These intermediary segments are not user defined but are created in search of an optimal course to a destination waypoint. (Column 2, lines 14-20). It would have been obvious to one having ordinary skill in the art at the time of the invention to create intermediate waypoints which are not based

upon user selected waypoints in order to keep track of segments the user must travel and determine that the user is indeed staying on the correct path as taught by Colley.

3. Claims 21-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fruchterman and Tognazzini in view of Anderson (US 5,684,476).

a. Per claim 21, Fruchterman teaches a method including calculating a course between two or more waypoints (column 4, lines 47-54), using GPS to determine present location coordinates (column 7, lines 9-11) which includes a heading, analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34) including heading information (see for example column 9, line 17), and providing an alert signal when the course contains user identified criteria (column 17, lines 34-37 and lines 47-49), wherein GPS heading data is a functional equivalent of an electronic compass signal, in that it provides a heading signal from prior logged positions. More accurate heading signals can be determined from other on-board sensors that are commonly included with GPS navigation equipment, such as compasses (see for example Maruyam (US005398188A)). Anderson specifically discusses the use of an electric compass with a GPS system in order to more accurately determine the heading of the vehicle when it is not moving. It would have been obvious to one having ordinary skill in the art at the time of the invention to use the compass and GPS system as taught by Anderson in order to provide a very accurate heading signal.

b. Per claim 23, Fruchterman teaches recording a track log (column 20, lines 15-31).

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c. Per claim 24, Fruchterman teaches calculating the course to avoid the area (column 17, lines 47-48).

d. Per claim 25, Fruchterman teaches verbal or Braille display to output the route to the user (column 3, lines 20-25).

e. Per claim 26, Fruchterman teaches using GPS to determine present location coordinates (column 7, lines 9-11) and a predetermined area around the area of exclusion (column 17, lines 24-49).

f. Per claim 27, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

g. Per claim 28, Fruchterman teaches that the area of exclusion can be any area relevant to a blind pedestrian and gives an example of a body of water (column 5, lines 1-10).

4. Claims 27-40 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fruchterman and Tognazzini in view of Heron (US 6,055,478).

a. Per claim 37, Fruchterman teaches a navigation device including a processor for calculating a course between two or more waypoints (column 4, lines 47-54), analyzing cartographic data for the course for user identified criteria to avoid (column 17, lines 24-34), and calculating the course to avoid the user identified criteria (column 17, lines 34-37 and lines 47-49). Fruchterman further teaches voice instructions (column 6, line 62 – column 7, line 4). However, the invention taught by Fruchterman discloses a speech synthesizer, rather than the wireless transmission of voice data as claimed. Transmitting voice data instructions in a navigation system

would have been well known to one of ordinary skill in the art at the time of the invention. Furthermore, because voice instructions are the “most fundamental” part of the Fruchterman system (see column 7, lines 1-2), it would have been obvious to one of ordinary skill in the art to modify the system of Fruchterman to ensure that voice data could be received from other sources than just the voice synthesizer. Heron discloses the use of transmitting and receiving voice data signals with a navigation system which is well known in the art (Column 4, lines 18-30; Abstract). It would have been obvious to one having ordinary skill in the art at the time of the invention since, as discussed above, the Fruchterman invention discloses a speech synthesizer and transmitting voice data instructions as taught by Heron is well known in the art, to include receiving and transmitting voice data instructions.

b. Per claim 38, Fruchterman teaches calculating the course to avoid the area (column 17, lines 47-48).

c. Per claim 39, Fruchterman teaches warning the user when approaching the area of exclusion (column 17, lines 34-37).

d. Per claim 40, Fruchterman teaches calculating the course to avoid the area (column 17, lines 47-48).

e. Per claim 43, the FRS frequency is approved by the FCC to provide “traveler assistance” (see 47 CFR § 95.193(a)). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a legally approved frequency to transmit the information.

5. Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Frutcherman and Tognazzini in view of Heron as applied to claim 37 above, and further in view of Colley (US 5,592,382).

a. Per claim 41, Fruchterman, Tognazzini and Heron fail to disclose calculating the course including identifying one or more non-user selected waypoints on the course. Colley, however, discusses the use of having intermediate waypoints along a segment to be able to establish that a vehicle is going the correct way and staying on course, which is well known in the art. These intermediary segments are not user defined but are created in search of an optimal course to a destination waypoint. (Column 2, lines 14-20). It would have been obvious to one having ordinary skill in the art at the time of the invention to create intermediate waypoints which are not based upon user selected waypoints in order to keep track of segments the user must travel and determine that the user is indeed staying on the correct path as taught by Colley.

Allowable Subject Matter

6. Claims 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: the prior art, individually or in combination, fails to disclose, teach or suggest determining the shape of the predetermined area based upon the radii extending along the heading from the present location, the radii including an angle formed from line segments emanating from the present location and

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wherein the angle includes user selectable values of greater than 0 degrees to 360 degrees.

Response to Arguments

7. Applicant's arguments with respect to claims 1, 8, 14, 29 and 44 filed 8/2/06 have been fully considered but they are not persuasive.

a. Specifically, with respect to claims 1, 8, 14, 29 and 44, Examiner respectfully disagrees with the Applicant's statement that neither Fruchterman nor Tognazzini discloses a size or shape of the predetermined area based on a speed or heading. As stated in the above rejection Fruchterman discloses using GPS to determine present location coordinates and a predetermined area around the present location for user identified criteria to avoid, however, as stated above, Fruchterman does not specifically disclose wherein the predetermined area has a shape based on a heading. Examiner agrees that Fruchterman only determines the shape of the predetermined area based upon boundaries that are set by the user, such as construction sites, lakes, etc. Examiner does not agree with the applicant that Tognazzini teaches a threat boundry completely independent of heading. Tognazzini discloses that a predetermined area is calculated based upon heading. As discussed by applicant, Tognazzini discloses that threat sphere is constructed based upon the location information, however, Tognazzini further discusses that a velocity vector is generated in order to determine the velocity of the aircraft, therefore, the threat sphere must move and change according to the direction of the aircraft and it is inherent then that the area is based upon heading and speed of the aircraft. (Column 8, lines 3-33)

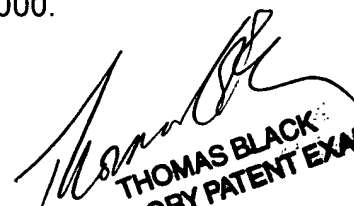
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marie A. Weiskopf whose telephone number is (571) 272-6288. The examiner can normally be reached on Monday-Thursday between 7:00 AM and 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MW


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